CLAIMS

I claim:

1. (original): An imaging system comprising:

a swallowable capsule comprising:

an ultra-wideband radar sensor system for imaging objects; and

controlling circuitry means that operatively regulates said imaging system; and

a transceiver to transmit imaging signals of said ultra-wideband radar sensor system and to receive controlling signals; and

a power supply for said imaging system.

2. (original): A system according to claim 1 and including a miniature communications port wherein the electrical circuitry within said capsule is connected through the capsule wall to electrical contacts located on the outside surface of the capsule wall.

3. (original): A system according to claim 1, and alternative claim 2, and including a reception system, operatively connected to said imaging system, which receives said transmitted imaging signals comprising:

a plurality of antennae; and

a power supply; and

storage means; and

controlling circuitry means operatively connecting the parts of said reception system.

4. (original): A system according to claim 3 and including a transceiver component for

wireless communication with other systems.

5. (original): A system according to claim 3 and including a communications port for direct wire communication with other systems.

6. (original): A system according to claim 3 and including:

a communications port for direct wire communication with other systems; and

a transceiver component for wireless communication with other systems.

7. (original): A system according to claim 3, and alternative claims 4 and 5 and 6, and including a programmable computer system operatively connected to said reception system and said imaging system, which processes said transmitted imaging signals saved in said storage means and controls said imaging system comprising:

a computer system; and

software programs which process said imaging signal data into various presentation formats; and

software programs to issue instructions to said controlling circuitry means of said imaging system; and

input means; and

transmission means operatively connecting said computer system input means with said storage means of said reception system.

8. (original): A system according to claim 7 and including a transceiver component for wireless communications with said transceiver component of said capsule and said transceiver component of said reception system.

9. (original): A system according to claim 7 and including a communications port for

direct wire connections with said miniature communications port of said capsule and said communications port of said reception system.

10.(original): A system according to claim 7 and including:

a transceiver component for wireless communications with other systems; and

a communications port for direct wire connections to other systems.

11.(original): A system according to claim 1 and alternative claim 2, wherein the electromagnetic wave emitter of said ultra-wideband radar sensor system is an ultraviolet frequency light emitting diode and the electromagnetic wave receiver is an ultraviolet frequency sensitive detector and the shell of said capsule is transparent to ultraviolet waves.

12.(original): A system according to claim 1 and alternative claim 2, wherein the electromagnetic wave emitter of said ultra-wideband radar sensor system is an infrared frequency light emitting diode and the electromagnetic wave receiver is an infrared frequency sensitive detector and the shell of said capsule is transparent to infrared waves.

13.(new): A system according to claim 1, and alternative claim 2, wherein a non-ultra-wideband receiver is substituted for the electromagnetic wave receiver of said ultra-wideband radar sensor system.

14.(new): A system according to claim 11, wherein a non-ultraviolet frequency sensitive receiver is substituted for said ultraviolet frequency sensitive detector.

15.(new): A system according to claim 12, wherein a non-infrared frequency sensitive receiver is substituted for said infrared frequency sensitive detector.

16.(new): A system according to claim 1, and alternative claims 2 through 15, wherein a transmitter is substituted for said transceiver of claim 1.

17.(new): A system according to claim 1, and alternative claims 2 through 16, wherein connecting circuitry means that enables signal communication amongst the components of said imaging system is substituted for said controlling circuitry of claim 1.

18.(new): A system according to claim 1, and alternative claims 2 through 17, wherein said capsule imaging system device does not include receiving means for imaging signals emitted by said capsule imaging system device.

19.(new): A system according to claim 3, and alternative claims 1 and 2 and claims 4 through 18, wherein said reception system includes receiver means to detect and process imaging signals emitted by said capsule imaging system device.

20.(new): A system according to claim 1 and alternative claim 2, wherein the electromagnetic wave emitter of said ultra-wideband radar sensor system is an ultraviolet frequency light emitting diode and the electromagnetic wave receiver is a visible light frequency sensitive detector and the shell of said capsule is transparent to infrared and visible light waves.